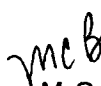
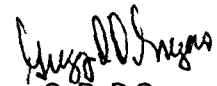


ER/WM&I DDT

<u>Source/Driver</u> (Name & Number from ISP, IAG milestone, Mgmt Action, Corres Control, etc)	<u>Closure #</u> (Outgoing Correspondence Control #, if applicable)	<u>N/A</u> <u>Due Date</u>
 _____ M C Burmeister Originator Name	 _____ G D DiGregorio QA Approval	_____ A M Tyson Contractor Manager(s)
_____ A K. Sieben Kaiser-Hill Program Manager(s)		_____ T G. Hedahl Kaiser-Hill Director

Document Subject

TRANSMITTAL OF THE RESPONSES TO QUESTIONS FROM THE CITIZENS' ADVISORY BOARD ON THE DRAFT
PROPOSED ACTION MEMORANDUM FOR THE SOURCE REMOVAL AT TRENCH 1, IHSS 108 - AMT-066-97

KH-00003NS1A

June 17, 1997

Discussion and/or Comments

Please find enclosed the responses to questions from the Citizens' Advisory Board on the DRAFT Proposed Action Memorandum for the source removal at Trench 1, IHSS 108

Attachments
As Stated

cc
M C Broussard
M C Burmeister
A C Crawford
C S Evans
A M Tyson
RMRS Records (2)

ADMIN RECORD

June 17, 1997

Norma Castaneda
ES&H Program Assessment
DOE, RFFO

TRANSMITTAL OF THE RESPONSES TO QUESTIONS FROM THE CITIZEN'S ADVISORY
BOARD ON THE DRAFT PROPOSED ACTION MEMORANDUM FOR THE SOURCE
REMOVAL AT TRENCH 1, IHSS 108

Please find enclosed the Responses to questions from the Citizens' Advisory Board on the
DRAFT Proposed Action Memorandum for the source removal at Trench 1, IHSS 108

If you have any questions regarding this transmittal, please contact me at (303) 966-9886

A K Sieben
Waste & Remediation Operations

bag

Orig and 1 cc N Castaneda

Enclosure
As Stated

**RESPONSES TO QUESTIONS
FROM THE
CITIZENS ADVISORY BOARD
ON THE
DRAFT PROPOSED ACTION MEMORANDUM
FOR THE
SOURCE REMOVAL AT TRENCH 1, IHSS 108**

Comment #1• What is the probability of a fire from the depleted uranium?

Response #1 *A probability has not been calculated due to the uncertainty of the condition of the depleted uranium (DU) chips and turnings, and the drums. However, these materials (drums and DU chips) have been buried for nearly 40 years contained in a water-based coolant, in an oxidizing environment, subject to groundwater and surface water exposure. The DU chips when originally generated and packaged are anticipated to be approximately 1/32" thick (approx 30 mils) ribbon-like lathe cuttings. Assuming a very moderate corrosion rate of only 1 mil/year, the chips could reasonably be expected to be completely oxidized in a 32 year period. Realistically, corrosion rates of 30-40 mils could be expected in a 3-4 year period. Based on this information, it is reasonable to conclude that the DU chips and turnings are oxidized or have a significant oxide-coating, which renders the material more stable, and creates less of a fire risk. The probability of a DU fire is low. However, due to the consequence of a release if a fire does occur, contingency planning is being developed for a fire event.*

Comment #2. What will happen to the remediation if the soil action levels become more stringent in the future?

Response #2 *The remediation effort would be re-evaluated based on the new levels at that point. More stringent action levels would still require the removal of the radiological material, as is being planned now.*

Comment #3• Can the public comment period on the PAM document be extended to 45 days?

Response #3 *A formal request for a 10 day extension has been submitted through the Environmental Protection Agency (EPA) and will be accommodated.*

Comment #4 What is the public's involvement in the remediation project?

Response #4 *RFCA specifies the community involvement for remedial actions. Consistent with that, the PAM is presently out for public review and comment. Additionally, the Department of Energy has committed to presenting the draft Sampling and Analysis Plan, Health and Safety Plan, Field Implementation Plan, and Auditable Safety Analysis to the Citizens' Advisory Board (CAB) ER/WM Sub-committee as part of an on-going dialogue on the T-1 Project.*

Comment #5: What is the monitoring program for this project, including both permanent and project specific monitors?

Response #5 *Air monitoring will be performed utilizing the existing RFETS Radioactive Ambient Air Monitoring Program (RAAMP) system which includes a series of permanent air monitoring stations throughout the plant site, including some off-site locations. The RAAMP system is utilized to track the RFETS site emissions, and specific RAAMP monitoring stations will be utilized to monitor and track project emissions. Additionally, a series of project site air monitors (hi-volume and low-volume samplers) will be utilized at the project boundaries to monitor daily activities. Wind speed and direction will be monitored during field activities and particulate and dust perimeter monitoring will be performed in accordance with RFETS procedures. Monitoring of volatile organic compounds around the site perimeter will be performed as described in the project Health and Safety Plan.*

Comment #6: Are there special fire protection and response equipment that will be needed for fire suppression?

Response #6 *Yes, as stated in the PAM, the preferred extinguishing agent for DU fires is a non-combustible, sodium-chloride based powder called MET-L-X. MET-L-X extinguishers and sodium-chloride based sand will be available at the project site. Site personnel will be trained in the use of each. The RFETS Fire Department is presently trained and prepared for fires of this nature. The RFETS Fire Department is an estimated 2-3 minutes from the project site.*

Comment #7: Is there a special emergency response plan for this project?

Response #7 *Yes, a project specific emergency response plan will be developed with project documents. This document is presently being developed.*

Comment #8: What kind of sampling and analysis protocol will be used during remediation of the trench?

Response #8 *A project specific Sampling and Analysis Plan is presently being written for the Trench 1 project. The Plan will include sections on sampling for waste characterization, trench boundary confirmation, and decontamination. The sampling and analysis protocol is consistent with EPA guidance and procedures and has been used on all previous removal actions.*

Comment #9: How will the waste be characterized?

Response #9 *Waste will be characterized at the time of generation. The Sampling and Analysis Plan will detail waste characterization procedures. We expect clean (sanitary), low-level radioactive waste (LLRW), mixed, and hazardous waste streams.*

Comment #10: Please provide a copy of the ACE TEAM reports on the T-1 Project.

Response #10 *A copy of the Final Trench 1 ACE document can be provided to the CAB upon completion of the ACE process.*

Comment #11. What steps have been taken to integrate the lessons learned from the remediation of the T-3 and T-4 trenches?

Response #11 *There are several sections within the PAM which address particular lessons learned from the T-3, T-4 Project. However, the lessons learned are typically incorporated into specific internal programs and/or procedures. In the PAM, Section 3.3 on page 23 of the PAM references the Health and Safety Plan (HASP) and in particular "radiological hold-points". Additionally, the PAM states that, "If field conditions vary from the planned approach, (ie unexpected conditions) an activity hazard analysis will be prepared for the existing circumstances and work will proceed according to the appropriate control measures". This entire section reinforces the fact that this information, in addition to details on air monitoring, will be included in the HASP. This section addresses a couple of the issues mentioned in the T-3/T-4 Corrective Actions document, including, 1) providing guidance for management of unexpected radiological conditions, 2) increasing awareness and use of Activity Hazard Analyses, and 3) implementation of radiological hold-points in ER activities.*

Section 3.0, in the first paragraph, of the PAM, it is stated "The project will utilize lessons learned from previous accelerated actions conducted at RFETS and other DOE-complex sites"

Comment #12 How does the T-1 remediation fit into the 10 year plan?

Response #12 *The T-1 remediation is scheduled for FY-98 according to the 10-year plan.*

Comment #13. Drum integrity in the trench appears to be questionable. With that in mind, what steps will be taken to contain loose material during excavation?

Response #13 *If drums containing DU are not intact, then approximately one cubic yard of the depleted uranium and associated material will be removed from the trench at a time, and placed directly into a steel hopper. The hopper lid will be closed for transport of the material to an adjacent enclosure for contamination screening, identification and segregation.*

Comment #14: If drums are not intact and the material is intermingled with surrounding soil, what is the potential of encountering nonoxidized depleted uranium? What studies have been done on the oxidation of depleted uranium in soil?

Response #14 *The potential for encountering unoxidized depleted uranium is low. The environment in which these drums have been buried for almost 40 years is almost assuredly one which would promote oxidation of the materials. Both surface water/groundwater intrusion and a water-based coolant would accelerate the corrosion (oxidation) of materials. Several DU removal actions have been performed at various DOE sites involving ordnance (DU shell casings). These removal actions generally involved shallow (0-2 feet) excavations or hand operations to remove DU fragments, and shells. The DU fragments and contaminated soils have been typically placed in drums or roll-offs for disposal. The pyrophoric nature of the DU material was never an issue.*

Should unoxidized material be encountered that is intermingled with immediate surrounding soil, the area will be excavated approximately one cubic yard at a time, and material will be placed in the hopper for transport to the enclosure for identification, segregation, treatment, and packaging

Comment #15: Because the liquid coolant which covered the material in the drums was water-based, what is the potential that it may have evaporated?

Response #15 *It is improbable that significant evaporation has occurred from intact drums buried at depth. Liquids within non-intact drums may be subject to some evaporation. Based on past projects at the site, drums buried during the same time period containing liquids, still contained residual liquids at the time of excavation.*

Comment #16: Since the potential for fire and smoldering effluent is evident, what considerations have been made for an enclosure around the excavation? If not an enclosure, what considerations were made for other effluent capture devices? (ie portable hood with HEPA filters)

Response #16 *Due to the extensive size of the trench and the need to use heavy equipment (excavator, dump truck, forklift vehicles) for removing the trench contents, it was determined by the ACE team, after a thorough examination, that the use of a containment structure over the trench excavation site would significantly increase the number of potential worker health and safety concerns and hazards. Limited egress from the structure in case of an emergency, such as a DU fire was considered a significant hazard. Limited access into the structure by emergency teams was also considered a problem.*

Working with heavy equipment in an enclosed space also generated significant hazards to workers. These hazards include injuries and accidents resulting from collision with heavy equipment operating in a limited work area, exposure to equipment emissions (CO, CO₂, nitrous oxides, and sulfur oxides), diesel fumes, gasoline fumes, Immediately Dangerous to Life and Health (IDLH) atmospheres, emergency response difficulties, and increased electrical hazards. Based on these findings, the ACE team recommended not using a containment structure over the Trench T-1 excavation site.

Waste treatment and segregation activities will be performed within a temporary containment structure as described in the Proposed Action Memorandum for the Source Removal at Trench 1, IHSS 108. This structure will have appropriate filters and atmospheric monitoring.

Comment #17: In the event of a fire what steps will be taken to contain runoff from extinguishers?

Response #17 *The extinguishing agent is a dry sodium-chloride based sand, and will not readily flow like a liquid extinguishing agent.*